

Layout & Utilities Requirements

Space Planning, Electrical Load & Water Requirements

1. Space Planning & Plant Layout

- Dedicated plant room or enclosed area recommended
- Levelled RCC floor with sufficient load-bearing capacity
- Minimum clear height for vessel installation and media loading
- Clear access for machinery movement and maintenance
- Separate zones for pre-treatment, RO, post-treatment, storage and electrical panels

2. Electrical Load & Power Requirements

- Single phase or three phase power supply as per plant capacity
- Voltage and frequency as per equipment specifications
- Dedicated power line for plant machinery
- Adequate load capacity for pumps, motors and panels
- Proper earthing, MCB/MCCB protection and surge protection
- Backup power provision recommended for critical applications

3. Water Requirements

- Continuous raw water availability during operating hours
- Raw water source: borewell, municipal supply or tanker
- Raw water analysis to be completed before installation
- Parameters to be checked: TDS, hardness, chlorine, iron, turbidity
- Raw water supply capacity to exceed RO plant output

4. Drainage & Wastewater Management

- Separate drainage line for RO reject water
- Backwash drainage provision for pre-treatment filters
- Floor drain to prevent water accumulation
- Compliance with local wastewater disposal norms

5. Environmental & Safety Considerations

- Adequate ventilation for heat and moisture control
- Proper lighting for operation and maintenance
- Non-slip flooring in wet areas
- Restricted access to unauthorized personnel

Important Note: Failure to meet layout and utility requirements may result in delayed installation, reduced system performance, increased maintenance issues, and potential safety risks.